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Docket No.: 10010107-1
AGIL -27,349
(PATENT)

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A serial communications link comprising:

2   a scrambler device for receiving a source encoded data bit stream, the scrambler device

scrambles the data bit stream on a group-wise basis to produce scrambled groups of data to

4   statistically balance the number of logic low and logic high bits in the groups of data; and

an ECC encoder device that receives the scrambled groups of data from the scrambler

6   device and converts said scrambled groups of data into ECC-encoded data.

2. (Original) The system as recited in Claim 1, further comprising:

2   a serializer for converting said ECC-encoded data into serialized data; wherein the ECC-

encoded data includes frame alignment information; and

4   the system further comprises a receiver for receiving said serialized data and converting

the serialized data into data frames based upon the frame alignment information.

3. (Previously Presented) The system as recited in Claim 2, wherein the receiver

2   comprises:

a frame-recoverer for converting said serialized data into data frames;

4   an ECC decoder for converting said data frames into ECC-decoded data and error

indications; and

6   a descrambler for converting said ECC-decoded data into de-scrambled data.

4. (Previously Presented) . The system as recited in Claim 3, wherein said frame-

2   recoverer uses said error indications in converting said serialized data into data frames.

5. (Cancelled)

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6. (Previously Presented) A serial communications method, comprising the steps of:

2　　　receiving a data bit stream, from an originating source, at a scrambler device, said data

bit stream comprising data bits and other bits;

4　　　converting, on a group-wise basis, said data bit stream into groups of scrambled data, by

said scrambler device, prior to performing another data function on said data bit stream, said

6　groups of scrambled data each comprising groups of data bits having a statistically balanced

number of logic low and logic high data bits; and

8　　　converting said scrambled data into ECC-encoded data.

7. (Original) The method as recited in Claim 6, further comprising the steps of:

2　　　generating a serial stream of the ECC-encoded data; and

transmitting said serial stream.

8. (Original) The method of Claim 7, wherein:

2　　　the ECC-encoded data includes frame alignment information; and

the method further comprises receiving said serialized data and converting said serialized

·4　data into data frames based upon said frame alignment information.

9. (Original) The method of Claim 7, further comprising:

2　　　receiving said serialized data;

converting said serialized data into data frames;

4　　　converting said data frames into ECC-decoded data and error indications; and

converting said ECC-decoded data into de-scrambled data.

10. (Original) The method of Claim 9, wherein the step of converting the serialized data

2　comprises converting the serialized data into data frames based upon said error indications.

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11. – 33. (Canceled)

34. (Previously Presented) A serial communication link comprising:

2   a scrambler device programed to convert, on a group-wise basis, a received bit stream into groups of K scrambled data bits so as to statistically balance the number of logic low and

4   logic high bits in each group of K scrambled data bits, said received bit stream being without redundant bits and being substantially only source encoded prior to being scrambled ; and

6   an ECC encoder programmed to convert said scrambled data into ECC-encoded data.

35. (Previously Presented) A serial communications link comprising:

2   a scrambler device for receiving a data bit stream being substantially only data source encoded, the scrambler device scrambles the data bit stream on a group-wise basis into

4   scrambled groups of data; and

       an ECC encoder device that receives the scrambled groups of data from the scrambler

6   device   and   converts   said   scrambled   groups   of   data   into   ECC-encoded   data.

36. (Previously Presented) A serial communications method, comprising the steps of:

2   receiving a data bit stream at a scrambler device, said data bit stream comprising data bits and other bits resulting from data source encoding;

4   converting, on a group-wise basis, said data bit stream into grouped scrambled data, by said scrambler device, prior to performing another data function on said data bit stream; and

6   converting said scrambled data into ECC-encoded data.

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37. (Previously Presented) A serial communication link comprising:

2   a scrambler device programed to convert, on a group-wise basis, a source encoded data

bit stream into grouped scrambled data; and

4   an ECC encoder programmed to convert said scrambled data into ECC-encoded data.

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